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| 09/749,825 | 12/28/2000 | John Alson Hicks III | 00216 | 5201 |

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| SALTARELLI, DOMINIC D |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>05 March 2010</u>.

2a)☒ This action is **FINAL**.          2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1,5-14,36 and 39-46</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,5-14,36 and 39-46</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

# DETAILED ACTION

## *Response to Arguments*

1.      Applicant's arguments with respect to claim1, 5-14, 36, and 39-46 have been

considered but are moot in view of the new grounds of rejection.

## *Claim Rejections - 35 USC § 103*

2.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.      Claims 1, 5, 6, 36, 39, 40, 41, and 44-46 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Humpleman (6,005,861, of record) in view of Eames et al.

(6,493,875, listed on the IDS filed 7/30/07) [Eames], Russo (6,732,366, of record), and

Meyer et al. (4,809,069, of record) [Meyer].

Regarding claims 1, 36, and 39, Humpleman discloses a system for

providing digital entertainment data, the system comprising:

a processor and memory connected to a bus (a "master" set top box

containing network interface units, routing received media through itself to the

network, thus the processor and memory of this set top box are connected to the

media bus the content is output to, col. 5, lines 20-25);

a data switch connected to the bus, the data switch receiving the

information signals and sending the information signals to a plurality of switch

ports (switch hub 38, shown in fig. 2, which comprises crossbar switch 44 which provides the switch ports that connect the devices, col. 5, lines 26-44) with a port for sending high-bandwidth information signals from the data switch (such as for sending video information to set top equipment, see fig. 2); and

multiple tuners and demodulator pairs with each pair selecting a respective content item from the plurality of content items (network interface units 32, col. 9, lines 44-64);

Humpleman fails to disclose the memory stores a browser based graphical user interface and a plurality of content items, a system data bus connected to the media bus and receiving information signals, a video overlay processor connected between the system data bus and media bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and sending the superimposed signal teh system data bus, a network bus connected to the system data bus and receiving the superimposed signal and the information signals, and a mass storage device connected to the system data bus and storing the information signals, and each tuner and demodulator pair connected to the system data bus and connected to an analog-to-digital converter, each tuner and demodulator pair sending an analog information signal the analog-to-digital converter, and the analog-to-digital converter outputting digital information signal based at least in part on the analog information signal.

In an analogous art, Eames discloses a system for providing digital entertainment data (fig. 3), and teaches that it is well known to utilize several interconnected buses to route information within a gateway (col. 5, lines 26-36). Designation of the buses within the system is a largely arbitrary practice, since interconnected buses can be considered a single bus or a collection of buses equally well. Eames simply names buses according to the type of data which they transport.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman to include plural interconnected buses as taught by Eames. While Humpleman clearly inherently includes a bus to transport data from the network interface units to the hub, Eames is evidence that it is obvious to designate plural interconnected buses for the transport of data. Whether the buses in question are physically distinct and indirectly coupled or only separate in the abstract sense cannot be determined, as the claimed media bus, system data bus, and network bus are disclosed in a sufficiently vague manner to include both possibilities (see fig. 6 of the originally filed disclosure). Either case is obvious and well known in view of the prior art, as the sole purpose of a bus is simply to transport data between circuits.

Humpleman and Eames fail to disclose the memory stores a browser based graphical user interface and a plurality of content items, a video overlay processor connected between the system data bus and media bus, the video overlay processor superimposing a first audio-visual signal over a second audio-

video signal to produce a superimposed signal and sending the superimposed

signal the system data bus, and a mass storage device connected to the system

data bus and storing the information signals, and each tuner and demodulator

pair connected to the system data bus and connected to an analog-to-digital

converter, each tuner and demodulator pair sending an analog information signal

the analog-to-digital converter, and the analog-to-digital converter outputting

digital information signal based at least in part on the analog information signal.

In an analogous art, Russo discloses a system for providing digital

entertainment data (fig. 2) including a mass storage device coupled to a system

data bus and storing information signals (fig. 2, storage 110, col. 7, lines 36-50),

providing the benefit of stored programming for later playback (col. 3, lines 9-21).

Further, Russo discloses storing in memory a browser based graphical user

interface, which upon instruction from the client device, a processor sends the

graphical user interface to the client device with the graphical user interface

describing the content items stored in the memory, the processor receiving a

command from the client device issued by a remote control, and the processor

retrieving another instruction from the memory that is associated with the

command issued by the remote control (the system provides a browser based

user interface which provides information regarding program usage indicators

and other descriptive data, granting access to stored and otherwise available

programming, col. 5 line 59 - col. 6 line 9 and col. 10 line 59 - col. 11 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman and Eames to include a mass storage device coupled to the system data bus and storing the information signals and a browser based graphical user interface stored in memory, as taught by Russo, for the benefit of stored programming for later playback and a convenient and intuitive means for accessing said programming by a user.

Humpleman, Eames, and Russo fail to disclose a video overlay processor connected between the system data bus and media bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and sending the superimposed signal the system data bus, and each tuner and demodulator pair connected to the system data bus and connected to an analog-to-digital converter, each tuner and demodulator pair sending an analog information signal the analog-to-digital converter, and the analog-to-digital converter outputting digital information signal based at least in part on the analog information signal.

In an analogous art, Meyer discloses a system for providing digital entertainment data that includes an overlay processor superimposing multiple information signals onto a first information signal (fig. 1a, PIP processor 50, col. 1, lines 19-27), providing the benefit of allowing a user to view several sources of video on a screen simultaneously.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman, Eames, and Russo to include

an overlay processor superimposing multiple information signals onto a first

information signal, as taught by Meyer, for the benefit of allowing a user to view

several sources of video on a screen simultaneously.  The location of this

processor is between the system bus and the media bus, as the multiple sources

of information signals originates from the media bus (as this is where the output

of the NIUs is first available), and are output to the system bus for transport

onwards to the data switch, the overlay processor being coupled to a fourth port

of the data switch for providing it's output to a requesting user device.

Humpleman, Eames, Russo, and Meyer fail to disclose each tuner and

demodulator pair sending an analog information signal the analog-to-digital

converter, and the analog-to-digital converter outputting digital information signal

based at least in part on the analog information signal.

The examiner takes official notice that the use of analog-to-digital

converters are notoriously well known in the art.  Humpleman teaches that some

of the sources accessed by the NIUs are analog transmissions, as some of the

receiver equipment utilize analog signals (Humpleman, col. 6 line 59 - col. 7 line

4), but singles out such a situation as being exceptional and not part of the digital

network.  But since A/D converters are so widely known, it would have been

obvious to one of ordinary skill in the art to modify Humpleman to include said

converters so that said analog transmissions could also be included in the digital

network, remedying the problem highlighted by Humpleman.

Regarding claims 5, 6, 40, and 41, Humpleman, Eames, Russo, and Meyer disclose the system and method of claims 1 and 36, wherein the mass storage device stores an item identifier corresponding to each stored content item, the item identifier having a value that indicates the content item has been played (for pay-per-play usage, Russo, col. 5, lines 12-21), another value indicated the content items has been purchased (for open ended usage, Russo, col. 5, lines 45-58), a third value indicating the content item has been licensed (available for viewing, Russo, col. 5 line 59 - col. 6 line 9), a cost of playback for each content item (to debit the account for pay-per-play usage, Russo, col. 10, lines 33-34) and a second cost of purchase for each content item (to debit the account for open ended usage, Russo, col. 10, lines 33-34). The examiner recognizes that the pay-per-play and open ended, or 'rental' paradigm, uses are disclosed as alternative embodiments in Russo, however, they are not mutually exclusive and therefore both included when Humpleman and Eames are modified in view of Russo's disclosure to include the mass storage device.

Regarding claim 44, Humpleman, Eames, Russo, and Meyer disclose the method of claim 36, further comprising a plurality of broadband data communication links, each broadband data communication link coupled to a respective switch port of the data switch (the outputs of the crossbar switch shown in fig. 3 of Humpleman, see col. 3, lines 49-55, wherein the switch ports

are a plurality of 100Base-T Ethernet switch ports, col. 3, lines 49-55, making the

switch an Ethernet switch), and a plurality of digital set top boxes, each digital set

top box coupled to a respective broadband data communication link

(Humpleman, col. 4 line 66 - col. 5 line 19).

Regarding claim 45, Humpleman, Eames, Russo, and Meyer disclose the

method of claim 36, wherein the data switch is a router (Humpleman, col. 6, lines

45-49).

Regarding claim 46, Humpleman, Eames, Russo, and Meyer disclose the

method of claim 36, wherein the broadband data communication links are

category 5 cables (Humpleman, col. 4, lines 48-51).

4.      Claims 7 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Humpleman, Eames, Russo, and Meyer as applied to claims 1 and 36 above, and

further in view of Zhu et al. (5,768,527, of record) [Zhu].

Regarding claims 7 and 42, Humpleman, Eames, Russo, and Meyer

disclose the system and method of claims 1 and 36, wherein a broadband data

port couples to the data switch to a receive a content item from a broadband data

service provider (Humpleman, col. 3, lines 21-35), but fail to disclose the content

item is downloaded and stored on the mass storage device at a data rate that is

less than a playback rate in bytes per second, and the system monitoring when a

remaining amount of time required to complete the download is less than a

playback time of the content item, such that the system may indicate that the

content item is available for playback.

In an analogous art, Zhu teaches a system for providing digital

entertainment data (fig. 5, col. 10, lines 17-38), wherein content items are

downloaded and stored at a data rate that is less than a playback rate in bytes

per second (the rate scaler reduces the download rate to a value less than the

original playback rate, from $R_i$ to $R'_i$ to accommodate for the limited bandwidth

that has been determined to be available for transmitting content), and the

system monitoring when a remaining amount of time required to complete the

download is less than a playback time of the content item, such that the system

may indicate that the content item is available for playback (there is an inevitable

delay involved where an amount of data must first be buffered such that the user

will not experience interruptions in playback while the rest of the content is

downloaded at the slower than playback rate, col. 4, lines 4-14 and 42-48). This

provides the benefit of allowing a viewer to receive and playback content items

over low bandwidth connections (col. 8, lines 25-40) without having to wait for the

entire file to be downloaded first (col. 4, lines 42-48).

It would have been obvious at the time to a person of ordinary skill in the

art to modify the system and method disclosed by Humpleman, Eames, Russo,

and Meyer to include the content item is downloaded and stored [on the mass

storage device] at a data rate that is less than a playback rate in bytes per

second, and the system monitoring when a remaining amount of time required to

complete the download is less than a playback time of the content item, such that

the system may indicate that the content item is available for playback, as taught

by Zhu, for the benefit of allowing a viewer to receive and playback content items

over low bandwidth connections without having to wait for the entire file to be

downloaded first.


5.      Claims 8-14 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Humpleman, Eames, Russo, and Meyer as applied to claims 1 and 36 above, and

further in view of Tsukagoshi (6,104,861, of record) and Halliwell et al. (5,473,772, of

record) [Halliwell].

Regarding claims 8 and 43, Humpleman, Eames, Russo, and Meyer

disclose the system and method of claim 1 and 36, wherein a broadband data

port couples to the data switch to a receive a content item from a broadband data

service provider (Humpleman, col. 3, lines 21-35), the content item

communicated from the data switch for storage at the mass storage device

(Russo, fig. 2, storage 110), but fail to disclose the content item comprises a

content item storage position identifier specifying a logical storage position in the

mass storage device, and when new content items are downloaded and stored, a

new content item storage position identifier is also downloaded for the content

item already stored on the mass storage device.

In an analogous art, Tsukagoshi teaches a system for providing digital

entertainment data comprising generating content item storage position

identifiers specifying a logical storage position in a mass storage device which

are downloaded to the storage device along with the content (the data stream

addresses regarding their position on the disk, col. 14 line 45 - col. 15 line 23),

providing the benefit of indexed content which is easily searchable by a user (col.

15, lines 24-45).

It would have been obvious at the time to a person of ordinary skill in the

art to modify the system and method disclosed by Humpleman, Eames, Russo,

and Meyer to include generating content item storage position identifiers

specifying a logical storage position in a mass storage device which are

downloaded to the storage device along with the content (the data stream

addresses regarding their position on the disk, as taught by Tsukagoshi,

providing the benefit of indexed content which is easily searchable by a user.

Humpleman, Eames, Russo, Meyer, and Tsukagoshi fail to disclose when

new content items are downloaded and stored, a new content item storage

position identifier is also downloaded for the content item already stored on the

mass storage device.

In an analogous art, Halliwell discloses a system for providing digital data

comprising a mass storage device, wherein new content item storage position

identifier are downloaded for content item already stored on the mass storage

device when new content items are downloaded (the new position identifier is a

delete command to remove the old content item to make room for the new

content items, col. 7, lines 43-52).

It would have been obvious at the time to a person of ordinary skill in the

art to modify the system and method disclosed by Humpleman, Eames, Russo,

Meyer, and Tsukagoshi to include a new content item storage position identifier

is also downloaded for the content item already stored on the mass storage

device, as taught by Halliwell, for the benefit of improved automatic maintenance

of the limited amounted of storage space available on a mass storage device,

automatically deleting old content items when necessary to make room for the

new content items.


Regarding claim 9, Humpleman, Eames, Russo, Meyer, Tsukagoshi, and

Halliwell disclose the system of claim 8, further comprising a first multimedia

input, the first multimedia input coupled to the multiple tuners, wherein the first

multimedia input is to receive a plurality of transmission signals (Humpleman, col.

3, lines 36-43, wherein the number of NIUs [the tuners] is determined by the

number of streams that are simultaneously required from the available sources,

wherein the multimedia input is a multiplex of broadcast signals carried by a

coaxial cable, col. 3, lines 21-35).


Regarding claims 10-14, Humpleman, Eames, Russo, Meyer, Tsukagoshi,

and Halliwell disclose the system of claim 9, wherein the plurality of transmission

signals include a plurality of television program signals (digital or mixed

analog/digital broadcast signals), an audio signal (compressed audio), a data

signal (Internet data), are received from a cable headend or direct broadcast

satellite (cable provider or digital satellite service), and are frequency divided

multplex transmission signals (as is conventional for cable and satellite television

broadcast services, Humpleman, col. 3, lines 21-35).

### *Conclusion*

6.    **THIS ACTION IS MADE FINAL.**  Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.  In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action.  In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is

(571)272-7302.  The examiner can normally be reached on Monday - Friday 9:00am -

6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Miller can be reached on (571) 272-7353.  The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.  Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/
Primary Examiner, Art Unit 2421